

AMENDMENTS TO THE CLAIMS

1. (Original) A system (20) for applying at least a portion of an authentication mark (26) to a substrate (28) and verifying the application of at least a portion of the mark (26) on the substrate (28), the substrate (28) being disposed on a production line (24), the system (20) comprising: an applicator locatable at the production line (24) and configured and arranged to apply at least one light-sensitive compound on the substrate (28) to produce at least a portion of the authentication mark (26); and a verification device (40) locatable at the production line and configured and arranged to verify application of the at least one light-sensitive compound on the substrate (28).
2. (Original) The system (20) according to claim 1, wherein the applicator is a continuous ink jet printer.
3. (Currently amended) The system (20) according to [any one of claims 1 and 2] claim 1, wherein the applicator is a printer (22) that prints an ink mixed with the at least one light-sensitive compound.
4. (Original) The system (20) according to claim 3, wherein the ink is a water-insoluble ink.
5. (Currently amended) The system (20) according to [any one of claims 1-4] claim 1, wherein the verification device (40) verifies whether a correct light-sensitive compound has been applied.
6. (Currently amended) The system (20) according to [any one of claims 1-5] claim 1, wherein the verification device (40) irradiates at least the at least one light-sensitive compound with light and detects a first light response of the at least one light-sensitive compound.
7. (Original) The system (20) according to claim 6, wherein the first light response is compared with a fingerprint.
8. (Currently amended) The system (20) according to [any one of claims 3-7] claim 3, wherein the printer (22) produces the least a portion of the mark by printing a first ink mixed with a first

light-sensitive compound and a second ink mixed with a second light-sensitive compound with a second ink.

9. (Original) The system (20) according to claim 8 wherein the first and second inks are the same ink.

10. (Currently amended) The system (20) according to [any one of claims 6-9] claim 6, wherein the verification device (40) detects a second light response.

11. (Original) The system (20) according to claim 10, wherein the second light response is compared with the fingerprint.

12. (Currently amended) The system (20) according to [any one of claims 10 and 11] claim 10, wherein the second light response is different from the first light response.

13. (Currently amended) The system (20) according to [any one of claims 10-12] claim 10, wherein the verification device (40) determines a ratio of the first and second responses and compares the ratio to a fingerprint.

14. (Currently amended) The system (20) according to [any one of claims 3-13] claim 3, wherein the printer (22) prints the at least one light-sensitive compound mixed with a solvent.

15. (Currently amended) The system (20) according to [any one of claims 1-14] claim 1, in combination with the substrate (28).

16. (Currently amended) The combination according to claim 15, wherein the substrate (28) is a product or a product package.

17. (Currently amended) The system (20) according to [any one of claims 1-16] claim 1, in combination with the production line (24).

18. (Currently amended) The combination according to [any one of claims 15-17] claim 15,

wherein the applicator is placed at the production line (24).

19. (Currently amended) The combination according to [any one of claims 15-18] claim 15, wherein the verification device (40) is placed at the production line (24).

20. (Currently amended) The combination according to [any one of claims 15-19] claim 15, wherein the verification device (40) and the applicator are placed at the production line (24) and wherein the verification device (40) is placed downline of the applicator.

21. (Currently amended) The system (20) according to [any one of claims 1-20] claim 1, further comprising a controller (42) communicating with both the applicator and the verification device (40).

22. (Currently amended) The system (20) according to [any one of claims 1-21] claim 1, further comprising an indicator (44) coupled to the verification device (40) and adapted to indicate the verification of at least the portion of the mark (26).

23. (Currently amended) The system (20) according to [any one of claims 1-22] claim 1, further comprising a controller (42) communicating with the verification device (40) and a production line controller.

24. (Currently amended) The system (20) according to [any one of claims 1-23] claim 1, wherein the verification device (40) comprises: a frame (50);

a light source (52) mounted to the frame (50), the light source (52) adapted to emit light having a predetermined wavelength to irradiate the at least one light-sensitive compound and the substrate (28); and

an excitation filter (56) mounted to the frame (50) and cooperating with the light source (52) to filter an undesired wavelength of light emitting from the light source (52);

wherein the frame (50) and at least one of the light source (52) and the excitation filter (56) are constructed and arranged such that at least one of the light source (52) and the excitation filter (56) is removable from the frame (50) by a user thereby allowing the user to employ at least one of a different light source capable of emitting light having a different predetermined

wavelength of light and a different excitation filter capable of filtering a different undesired wavelength of light emitting from the light source.

25. (Original) The system (20) according to claim 24, wherein the verification device (40) further comprises an emission filter (60) mounted to the frame (50) and adapted to filter an undesired wavelength of light emitting from at least one of the substrate (28), the at least one light- sensitive compound and ambient light ;

wherein the frame (50) and the emission filter (60) are constructed and arranged such that the emission filter (60) is removable from the frame (50) by a user thereby allowing the user to employ a different emission filter capable of filtering a different undesired wavelength of light emitting from at least one of the substrate (28), the least one light-sensitive compound and the ambient light.

26. (Currently amended) The system (20) according to [any one of claims 24 and 25] claim 24, wherein the verification device (40) further comprises a detector (54) mounted to the frame (50) and adapted to detect light response from the at least one light-sensitive compound.

27. (Currently amended) The system according to [any one of claims 24-26] claim 24, wherein the verification device (40) further comprises an excitation lens (58) mounted to the frame (50) and adapted to focus light emitting from the light source.

28. (Original) The system (20) according to claim 27, wherein the frame (50) and the excitation lens (58) are constructed and arranged such that the excitation lens (58) is removable from the frame (50) by a user thereby allowing the user to employ a different excitation lens.

29. (Currently amended) The system (20) according to [any one of claims 24-28] claim 24, wherein the verification device (40) further comprises an emission lens (62) mounted to the frame (50) and adapted to focus light emitting from at least one of the substrate (28), the least one light-sensitive compound and the ambient light.

30. (Original) The system according to claim 29, wherein the frame (50) and the emission lens (62) are constructed and arranged such that the emission lens (62) is removable from the frame

(50) by a user thereby allowing the user to employ a different emission lens.

31. (Original) A method of applying at least a portion of an authentication mark to a substrate and verifying the application of at least the portion of the mark, the substrate being disposed on a production line, the method comprising: applying at least one light-sensitive compound on the substrate to produce at least the portion of the authentication mark (100), the application occurring as the substrate proceeds through the production line ;

and verifying application of the at least one light-sensitive compound on the substrate as the substrate proceeds through the production line (106).

32. (Original) The method according to claim 31, wherein verifying application of the at least one light-sensitive compound comprises detecting a light response from the at least one light-sensitive compound as the substrate proceeds through the productionline 106.

33. (Currently amended) The method according to [any one of claims 31 and 32] claim 31, further comprising packaging the substrate (114) after the substrate has been verified as having a correct mark (106).

34. (Currently amended) The method according to [any one of claims 31-33] claim 31, further comprising shipping the substrate (116).

35. (Currently amended) The method according to [any one of claims 31-34] claim 31, wherein applying at least one light- sensitive compound to produce the mark comprises mixing a first light-sensitive compound with a first ink.

36. (Currently amended) The method according to [any one of claims 31-35] claim 31, wherein verifying the application of the at least one light-sensitive compound comprises irradiating the at least one light-sensitive compound with light and detecting a first light response.

37. (Original) The method according to claim 36, wherein the first light response is compared with a fingerprint.

38. (Currently amended) The method according to [any one of claims 31-37] claim 31, wherein applying at least one light- sensitive compound to produce at least the portion of the mark comprises mixing a first light- sensitive compound with a first ink and a second light-sensitive compound with a second ink.

39. (Original) The method according to claim 38, wherein the first and second inks are the same ink.

40. (Currently amended) The method according to [any one of claims 38 and 39] claim 38, wherein verifying the application of the at least one light-sensitive compound comprises detecting a second light response from the second light-sensitive compound.

41. (Original) The method according to claim 40, wherein the second light response is compared with a fingerprint.

42. (Currently amended) The method according to [any one of claims 40 and 41] claim 40, wherein the second light response is different from the first light response.

43. (Currently amended) The method according to [any one of claims 40-42] claim 40, further comprising obtaining a ratio of the first and second light responses and comparing the ratio to a fingerprint.

44. (Currently amended) The method according to [any one of claims 31-43] claim 31, wherein applying at least a portion of the mark comprises mixing the at least one light-sensitive compound with a solvent.

45. (Currently amended) The method according to [any one of claims 31-44] claim 31, wherein applying at least a portion of the mark as the substrate proceeds through the production line comprises stopping the substrate during application.

46. (Currently amended) The method according to [any one of claims 31-44] claim 31, wherein applying at least a portion of the mark as the substrate proceeds through the production line

comprises applying at least a portion of the mark as the substrate moves along the production line.

47. (Currently amended) The method according to [any one of claims 31-46] claim 31, wherein verifying application of the at least one light-sensitive compound as the substrate proceeds through the production line comprises stopping the substrate during verifying.

48. (Currently amended) The method according to [any one of claims 31-46] claim 31, wherein verifying application of the at least one light-sensitive compound as the substrate proceeds through the production line comprises verifying as the substrate moves along the production line.